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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,276	07/06/2001	Frank Roesl	012627-023	3914
21839	7590	03/24/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			ANGELL, JON E	
POST OFFICE BOX 1404			ART UNIT	PAPER NUMBER
ALEXANDRIA, VA 22313-1404			1635	

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/899,276

Applicant(s)

ROESL ET AL.

Examiner

J. Eric Angell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 11-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date advised
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: NOTICE TO COMPLY.

### **DETAILED ACTION**

1. This Action is in response to the communication filed on 12/23/01. The amendment has been entered. Claims 1-15 are currently pending in the application and are addressed herein.

#### ***Election/Restrictions***

2. Applicant's election with traverse of Group I, claims 1-10, and further election of the species transcription factor AP-1 in the Paper filed 12/23/03 is acknowledged. The traversal is on the ground(s) that examination of all claims can be done without a serious search burden. This is not found persuasive because the three different Groups set forth in the previous election requirement indicated that each Group was classified in a different Class and/or subclass, prima facie evidence of search burden. Specifically, Group I is classified in class 435, subclass 320.1; Group II is classified in class 514, subclass 2; and Group III is classified in class 514, subclass 44. Since the different Groups have different classifications/subclassifications, this is prima facie evidence of a serious search burden, as the examiner would be required to search the different classes and subclasses for each Group.

3. Applicants also argue that Groups I and II are linked by linking claims and that should the elected product claims be allowable, the method claims must be rejoined. In response, it is acknowledged that should different Groups be linked by proper linking claims, then when the elected product claims are found allowable, the linked methods claims would be rejoined. However, in the instant case, Groups I and II are not linked by proper linking claims. Group I is drawn to a nucleic acid/vector and host cell while Group II is drawn to pharmaceutical compositions comprising compounds that are capable of regulating the expression of the MCP-1

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gene by interacting with the nucleic acid of Group I. These Groups are not linked by proper linking claims because proper linking claims encompass claims drawn to products and methods of making and using the product. Here Group I is a product and Group II is a different product.

4. It is noted, however, that Group I and Group III are linked as a product and a method of using the product, and as such, should the claims of Group I be found allowable, Group III will be rejoined with Group I, ONLY as set forth in *In re Ochiai*, indicated below.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained.

**Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined.** See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

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Furthermore, Applicants argue that the election of species “further limits any search burden”. This is not found persuasive because a serious search burden still exists as evidenced by the fact that different classes/subclasses would have to be searched for each Group, regardless of the elected species.

Additionally, Applicants argue that Group III is classed with Group II and that Group III is also linked to Group I. With respect to the classifications of Group II and Group III, as indicated above, these Groups have different subclassifications, prima facie evidence of a serious search burden. With respect to Groups I and III being linked, it is acknowledged, as indicated above, that should the product claims (Group I) be found allowable, and only if all of the withdrawn process claims (Group III) are commensurate in scope with the allowed product, then Groups I and III (but not Group II) will be rejoined.

The requirement is still deemed proper at this time, and therefore is made FINAL.

5. Claims 11-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the Paper filed 12/23/03.

### ***Sequence Compliance***

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 C.F.R. § 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 C.F.R. §§ 1.821-1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent

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Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures.

Applicant must comply with the requirements of the sequence rules (37 CFR 1.821 - 1.825) in response to this Office Action in order to avoid ABANDONMENT.

Failure to comply with these requirements will result in ABANDONMENT of the application under 37 C.F.R. § 1.821(g). Applicant is requested to return a copy of the attached Notice to Comply with the response, if necessary.

It is noted that the specification contains sequences such as those disclosed on pages 5, 14, 18, 22, Figure 6, claim 2 and claim 3 that must be assigned appropriate Sequence identifiers (SEQ ID NOS.). Additionally, these sequences need to be present on a separate paper sequence listing and CRF. It appears that the sequence of claim 2 is the sequence of SEQ ID NO. 1 and the sequence of claim 3 is SEQ ID NO. 8. Therefore, the sequence errors have not precluded examination of the instant claims. However, in response to the instant Office Action, applicants must amend the specification (including claims 2 and 3) such that the disclosed sequences are assigned the appropriate SEQ ID NO. If additional sequence identifiers are required, then a new paper sequence listing as well as a new CRF will also be required. However, if the amendment merely requires adding SEQ ID NOS to the specification/claims/figure wherein the SEQ ID NOS. are already present on the sequence listing and CRF, then submission of a new CRF/sequence listing is not required.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The instant claims are deemed to be drawn to non-statutory subject matter because the claims encompass a naturally occurring nucleic acid molecule that comprises the limitations of claim 1, such as a naturally occurring human chromosome 17 in a human cell. That is, since the claims are not explicitly drawn to an isolated nucleic acid molecule, the claims must encompass naturally occurring nucleic acid molecules, such as human chromosome 17 in its natural state (i.e., in a human cell in a human body).

It is noted that amending claim 1 to indicate that the nucleic acid is an isolated nucleic acid molecule (in line 1), would obviate this rejection.

### ***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The Written Description Guidelines for examination of patent applications indicates, “the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice, or by disclosure of relevant, identifying characteristics, i.e. structure or other physical and/or other chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show applicant was in possession of the claimed genus.” (See MPEP 2100-164)

In the instant case, claim 1 is drawn to a nucleic acid molecule comprising a nucleic acid sequence encoding a protein having the biological activity of MCP-1 (see claim 1, part (a)). As such, claim 1, and all dependent claims, encompass nucleic acid sequences which differ from the nucleic acid sequences described in the specification (i.e., the nucleic acid sequence encoding MCP-1), including variant nucleic acid sequences which are not adequately described in the specification. Considering that the claims encompass nucleic acid sequences which encode a protein having MCP-1 biological activity, the claims encompass a genus of nucleic acid sequences that is indeterminant in size, but could possibly encompass thousands of different nucleic acid sequences, considering all of possible nucleic acid sequences, including unidentified nucleic acid sequences which encode a protein having MCP-1 biological activity. It is noted that not only does the genus of molecules encompass sequence homologues, and allelic variants, but also includes functional homologues which could have completely different structures (i.e., sequence), yet have the same function.

As indicted above, the guidelines indicate that a sufficient description of a representative number of species is required, such as by “disclosure of relevant, identifying characteristics, i.e.

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structure or other physical and/or other chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show applicant was in possession of the claimed genus.” In the instant case, the specification and prior art do not describe the relevant structural, physical or chemical properties that confer the biological activity of MCP-1 to a protein. That is, the specification and prior art do not identify the minimal critical features of the molecules encompassed by the claims that are required to encode a functional MCP-1 homologue. Without a clear indication of the features (sequences) that are critical for conferring MCP-1 biological activity, the structure-function relationship of the sequences encompassed by the claims has not been adequately described. As such, one of skill in the art would not be able to readily recognize which nucleic acid sequences would be nucleic acid sequences that encode a protein having the biological activity of MCP-1. Therefore, applicants have not sufficiently described the genus of nucleic acid sequences that are encompassed by the claims. It is noted that a review of the prior art did indicated that there are at least two sequence homologues, one encoding mouse JE and another encoding human JE (e.g., see Rollins et al., MCB 1998), however, the sequence structures of these homologues which are critical to conferring the biological activity of MCP-1 to the proteins are not described. Therefore, there is an insufficient description of the nucleic acid sequences encompassed by the claims.

It is noted that claims 2-10 depend on claim 1, and thus encompass all of the limitations of claim 1. Therefore, claims 2-10 are rejected for the same reasons.

9. Additionally, claims 1-10 are also rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for:

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A nucleic acid molecule comprising: (a) a nucleic acid sequence encoding MCP-1, the protein encoded by the nucleic acid sequence of EMBL Accession No. Y18933; and (b) and a 5'-DHSR or 3'-DHSR wherein said 5'-DHSR or said 3'-DHSR comprises the nucleic acid sequence TGAGTCA, or SEQ ID NO. 8, or SEQ ID NO. 1;

does not reasonably provide enablement for the full scope of the claims—such as a nucleic acid comprising a nucleic acid sequence encoding a protein having the biological activity of MCP-1, and 5'-DHSRs or 3'-DHSRs that do not explicitly comprise TGAGTCA or SEQ ID NO. 1 or SEQ ID NO. 8. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

10. As mentioned above, the claims encompass sequences for which there is insufficient written description provided in the specification and include sequence homologues as well as functional homologues which may have completely different structures from the disclosed sequences. Without a clear indication of the minimal critical elements that are required to confer MCP-1 biological activity to a protein, the written description requirements have not been sufficiently met. As such, one of skill in the art would not know how to make or use the claimed invention without performing an undue amount of additional experimentation in order to first properly identify a representative number of species encompassed by the claims.

11. Claims 1, 5 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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As mentioned above, the Written Description Guidelines for examination of patent applications indicates, "the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice, or by disclosure of relevant, identifying characteristics, i.e. structure or other physical and/or other chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show applicant was in possession of the claimed genus." (See MPEP 2100-164).

The instant claims are drawn to a nucleic acid as indicated in claim 1(b) wherein the hypersensitive sequences contain mutations resulting in a modified DNase I hypersensitivity, S1 hypersensitivity, and/or altered interaction with a transcription factors. Therefore, the claims encompass a genus of molecules which is indeterminant in size, but could encompass thousands of different species, considering all of the mutations which could possibly result in a modifies hypersensitivity and/or interaction with transcription factors, including mutations that have yet to be identified. Since the specification and prior art does not disclose a representative number of mutations which modify DNase I hypersensitivity, S1 hypersensitivity and/or altered interaction with transcription factors, the written description requirement has not been met.

It is noted that claims 5 and 6 depend on claim 1. Therefore, claim 1 must broadly encompass the limitations of claim 5 and 6. As such, the rejection is applicable to claims 1, 5, and 6.

12. Additionally, claims 1, 5 and 6 are also rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for:

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A nucleic acid molecule comprising: (a) a nucleic acid sequence encoding MCP-1, the protein encoded by the nucleic acid sequence of EMBL Accession No. Y18933; and (b) and a 5'-DHSR or 3'-DHSR wherein said 5'-DHSR or said 3'-DHSR comprises the nucleic acid sequence TGAGTCA, or SEQ ID NO. 8, or SEQ ID NO. 1;

13. does not reasonably provide enablement for the full scope of the claims—such as a nucleic acid comprising a nucleic acid sequence encoding a protein having the biological activity of MCP-1, and 5'-DHSRs or 3'-DHSRs that have mutations that result in DNase I hypersensitivity, S1 hypersensitivity, or altered interaction with transcription factors. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. As mentioned above, the claims encompass mutations for which there is insufficient written description provided in the specification. Without a clear indication of the mutations that confer hypersensitivity/altered transcription factor binding, the written description requirements have not been sufficiently met. As such, one of skill in the art would not know how to make or use the claimed invention without performing an undue amount of additional experimentation in order to first properly identify a representative number of species encompassed by the claims.

It is noted that claims 5 and 6 depend on claim 1. Therefore, claim 1 must broadly encompass the limitations of claim 5 and 6. As such, the rejection is applicable to claims 1, 5, and 6.

### ***Claim Rejections - 35 USC § 102***

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-4 and 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by

Genbank Accession No. AC005549 (Birren et al., see sequence alignment attached. NOTE:

Birren is listed in the IDS PTO-1449.)

16. Birren (Genbank Accession No. AC005549) teaches a bacterial artificial chromosome (BAC) comprising a portion of chromosome 17 that comprises SEQ ID NO. 1, as well as the genomic DNA encoding the MCP-1 gene. The Genbank data (see attached) indicates that the sequence matching SEQ ID NO. 1 is comprised in a BAC, wherein the BAC also includes a genomic sequence encoding MCP-1. Since SEQ ID NO. 1 is the 3'DHSR nucleic acid sequence from position +2430 to +3019 as depicted in Figure 6 (see claim 2), and the genomic sequence encoding human MCP-1, the BAC taught by Birren in Genbank Accession No. AC005549 thus meets the limitations of claims 1-4. It is noted that the BAC is a recombinant vector that must include all of the genomic sequences of chromosome 17 associated with the expression of MCP-1 in human cells (i.e., the regulatory elements that allow the expression of MCP-1 in eukaryotic host cells). Furthermore, the construction of the BAC would require the transformation of the BAC into bacterial cells for the propagation of the instant BAC. As such, Birren (through Genbank Accession No. AC005549) necessarily teaches all of the limitations of the instant claims.

***Conclusion***

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Eric Angell whose telephone number is (571) 272-0756. The examiner can normally be reached on M-F (8:00-5:30) with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John L. LeGuyader can be reached on (571) 272-0760. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jon Eric Angell, Ph.D.  
Art Unit 1635



J. Eric Angell  
Art Unit 1635

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      /number=2
      8968. .>9073
      /gene="MCP-1"
      /number=3
exon
ORIGIN
Query Match      100.0%;  Score 600;  DB 9;  Length 11793;
Best Local Similarity 100.0%;  Pred. No. 9.3e-143;
Matches 600;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps 0;

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      |||
Db      9979 TAGGAAAATTATAGGATCATTAAGAAAGGAGAAGGAAGAGTGGGAGCAAATACCTGGAGG 10038

Qy      61  TAGAAATGGTGATGATGTGTACATCAAGCAGGGAGAAAACCAATGAACCAGATGCGAATT 120
      |||
Db     10039 TAGAAATGGTGATGATGTGTACATCAAGCAGGGAGAAAACCAATGAACCAGATGCGAATT 10098

Qy     121  CGGGCCACACCAATGTCAAGGGATGACAATTAGAAAGGAAGGTTGAGTCAAGGGATTG 180
      |||
Db     10099 CGGGCCACACCAATGTCAAGGGATGACAATTAGAAAGGAAGGTTGAGTCAAGGGATTG 10158

Qy     181  AATGTTAGGGTGAAAAGTTACTACTCAACTCTGTAGGTTAAAAGGAAACGTTGAGAATCT 240
      |||
Db     10159 AATGTTAGGGTGAAAAGTTACTACTCAACTCTGTAGGTTAAAAGGAAACGTTGAGAATCT 10218

Qy     241  TCAGTCCAATGAGGAGGGATGTGCCATGTTTAGAGATTCAGAGATAAGTTTCAGGAAATG 300
      |||
Db     10219 TCAGTCCAATGAGGAGGGATGTGCCATGTTTAGAGATTCAGAGATAAGTTTCAGGAAATG 10278

Qy     301  TAACTTATAGATTTTATACATACACAGAGAAATACGGACTAGTGAGAAGCTATTGCCATG 360
      |||
Db     10279 TAACTTATAGATTTTATACATACACAGAGAAATACGGACTAGTGAGAAGCTATTGCCATG 10338

Qy     361  GTCCAAGCAAGAGATGATGAAGGCCTAAATATGGAGCCAAAGAGGCAGCAATGAAGAATG 420
      |||
Db     10339 GTCCAAGCAAGAGATGATGAAGGCCTAAATATGGAGCCAAAGAGGCAGCAATGAAGAATG 10398

Qy     421  AGCCATGCAGGGTGAAATGCTGCATGTTGTAAATGGAGGAGAAAGACCTGTGACTTCAGA 480
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Db     10399 AGCCATGCAGGGTGAAATGCTGCATGTTGTAAATGGAGGAGAAAGACCTGTGACTTCAGA 10458

Qy     481  TATGAAAACCTCATCTTCAACCCACATTTTAAGGGGGCAGCTTCCCTGAAACCAGAATGT 540
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Qy     541  GTTTCCTCCATTACTATACCCCCATCCCAATCTCAGGCACCTGGAATCATCCATTTAAA 600
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Db     10519 GTTTCCTCCATTACTATACCCCCATCCCAATCTCAGGCACCTGGAATCATCCATTTAAA 10578

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RESULT 4
AC005549/c
LOCUS      AC005549      147416 bp      DNA      linear      PRI 22-SEP-1998
DEFINITION Homo sapiens chromosome 17, clone hRPK.215_E_13, complete sequence.
ACCESSION  AC005549
VERSION    AC005549.1  GI:3598724

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KEYWORDS HTG.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 147416)

AUTHORS Birren,B., Linton,L., Nusbaum,C. and Lander,E.

TITLE Homo sapiens chromosome 17, clone hRPK.215\_E\_13

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 147416)

AUTHORS Birren,B., Fasman,K., Linton,L., Nusbaum,C., Lander,E., Allen,N., Anderson,M., Baker,J., Baldwin,J., Barna,N., Beckerly,R., Benn,J., Boutwell,C., Brown,A., Castle,A., Cerny,J., Colangelo,M., Collins,S., Collymore,A., Cooke,P., Corliss,D., Depayre,E., Devon,K., Dewar,K., Donelan,L., Ferreira,P., FitzHugh,W., Forrest,C., Funke,R., Gage,D., Gardyna,S., Geraigery,K., Grant,G., Hagos,B., Heaford,A., Herena,L., Horton,L., Howland,J.C., Jacotot,L., Jones,C., Kann,L., Karatas,A., Lehoczkj,J., Macdonald,P., Marquis,N., McEwan,P., McGurk,A., McKernan,K., Meldrim,J., Molla,M., Morris,W., Morrow,J., Mychaleckyj,J., Nahf,R., Naylor,J., Niloff,M., O'Connor,T., O'Donnell,P., Pavlin,B., Peterson,K., Riley,R., Roberts,D., Roy,A., Stange-Thomann,N., Stilwell,J., Stojanovic,N., Stone,C., Subramanian,A., Tesfaye,S., Tichovolsky,N., Torruella-Miller,I., Vassiliev,H., Vo,A., Wagner,A., Wheeler,J., Wu,Y., Wyman,D., Ye,W.J., Zhao,J. and Zody,M.

TITLE Direct Submission

JOURNAL Submitted (27-AUG-1998) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

REFERENCE 3 (bases 1 to 147416)

AUTHORS Birren,B., Fasman,K., Linton,L., Nusbaum,C., Lander,E., Allen,N., Anderson,M., Baker,J., Baldwin,J., Barna,N., Beckerly,R., Benn,J., Boutwell,C., Brown,A., Castle,A., Cerny,J., Colangelo,M., Collins,S., Collymore,A., Cooke,P., Corliss,D., Depayre,E., Devon,K., Dewar,K., Donelan,L., Ferreira,P., FitzHugh,W., Forrest,C., Funke,R., Gage,D., Gardyna,S., Geraigery,K., Grant,G., Hagos,B., Heaford,A., Herena,L., Horton,L., Howland,J.C., Jacotot,L., Jones,C., Kann,L., Karatas,A., Lehoczkj,J., Macdonald,P., Marquis,N., McEwan,P., McGurk,A., McKernan,K., Meldrim,J., Molla,M., Morris,W., Morrow,J., Mychaleckyj,J., Nahf,R., Naylor,J., Niloff,M., O'Connor,T., O'Donnell,P., Pavlin,B., Peterson,K., Riley,R., Roberts,D., Roy,A., Severy,P., Stange-Thomann,N., Stilwell,J., Stojanovic,N., Stone,C., Subramanian,A., Tesfaye,S., Tichovolsky,N., Torruella-Miller,I., Vassiliev,H., Vo,A., Wagner,A., Wheeler,J., Wu,Y., Wyman,D., Ye,W.J., Zhao,J. and Zody,M.

TITLE Direct Submission

JOURNAL Submitted (12-SEP-1998) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA

REFERENCE 4 (bases 1 to 147416)

AUTHORS Birren,B., Fasman,K., Linton,L., Nusbaum,C., Lander,E., Allen,N., Anderson,M., Baker,J., Baldwin,J., Barna,N., Beckerly,R., Benn,J., Boutwell,C., Brown,A., Castle,A., Cerny,J., Colangelo,M., Collins,S., Collymore,A., Cooke,P., Corliss,D., Depayre,E., Devon,K., Dewar,K., Donelan,L., Ferreira,P., FitzHugh,W., Forrest,C., Funke,R., Gage,D., Gardyna,S., Geraigery,K., Grant,G., Hagos,B., Heaford,A., Herena,L., Horton,L., Howland,J.C.,

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Meldrim,J., Molla,M., Morris,W., Morrow,J., Mychaleckyj,J.,  
Nahf,R., Naylor,J., Niloff,M., O'Connor,T., O'Donnell,P.,  
Pavlin,B., Peterson,K., Riley,R., Roberts,D., Roy,A., Severy,P.,  
Stange-Thomann,N., Stilwell,J., Stojanovic,N., Stone,C.,  
Subramanian,A., Tesfaye,S., Tichovolsky,N., Torruella-Miller,I.,  
Vassiliev,H., Vo,A., Wagner,A., Wheeler,J., Wu,Y., Wyman,D.,  
Ye,W.J., Zhao,J. and Zody,M.

TITLE Direct Submission  
JOURNAL Submitted (22-SEP-1998) Whitehead Institute/MIT Center for Genome  
Research, 320 Charles Street, Cambridge, MA 02141, USA  
COMMENT On Sep 13, 1998 this sequence version replaced gi:3581743.  
All repeats were identified using RepeatMasker: Smit, A.F.A. &  
Green, P. (1996-1997)  
<http://ftp.genome.washington.edu/RM/RepeatMasker.html>

Only the first 147416 bases of this clone are being submitted.  
Bases 145417-155040 overlap accession number AC004147 (WICGR  
project L228). The first 2Kb of the overlapping region are  
submitted to confirm overlap.

FEATURES	Location/Qualifiers
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repeat_region	complement(4228. .4469) /rpt_family="MLT1I"
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Matches 600; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 58734 TAACTTATAGATTTTATACATACACAGAGAAATACGGACTAGTGAGAAGCTATTGCCATG 58675

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## RESULT 5

HSJERR

LOCUS HSJEPR 2243 bp DNA linear PRI 03-NOV-1992

DEFINITION H.sapiens gene for JE protein, exons 3 and 4.

ACCESSION X60001

VERSION X60001.1 GI:34001

KEYWORDS JE protein; secretory protein.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (bases 1 to 2243)

AUTHORS Schwarz,E., Fan,E., Kallin,B., Sorrentino,V. and Bloom,B.

TITLE The IFN-gamma inducible cDNA gamma.1 is an incompletely spliced JE  
cDNA

JOURNAL Unpublished

REFERENCE 2 (bases 1 to 2243)

AUTHORS Schwarz,E.

TITLE Direct Submission

JOURNAL Submitted (16-MAY-1991) E. Schwarz, Albert Einstein College of  
Medicine, Dept of Microbiology & Immunology, Forchheimer Bldg Room  
411, 1300 Morris Park Avenue, Bronx NY 10461, USA

FEATURES Location/Qualifiers

source

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<b>Notice to Comply</b>	Application No. <b>09/899,276</b>	Applicant(s) <b>Rösl et al.</b>	
	Examiner <b>J. Eric Angell</b>	Art Unit <b>1635</b>	

**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

Applicant must file the items indicated below within the time period set the Office action to which the Notice is attached to avoid abandonment under 35 U.S.C. § 133 (extensions of time may be obtained under the provisions of 37 CFR 1.136(a)).

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

- ☒ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to the final rulemaking notice published at 55 FR 18230 (May 1, 1990), and 1114 OG 29 (May 15, 1990). If the effective filing date is on or after July 1, 1998, see the final rulemaking notice published at 63 FR 29620 (June 1, 1998) and 1211 OG 82 (June 23, 1998).
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- ☐ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- ☐ 7. Other: \_

**Applicant Must Provide:**

- ☒ An initial or **substitute** computer readable form (CRF) copy of the "Sequence Listing".
- ☒ An initial or **substitute** paper copy of the "Sequence Listing", as well as an amendment directing its entry into the **specification**.
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216 or (703) 308-2923

For CRF Submission Help, call (703) 308-4212

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